Please note: appendices A, Cand D. are missing from Paper # 12. APPENDIX ARE MISSING FROM

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**VAPENDIX B** 

## ហ RAD.

Trading Technologies suite of products gives you and your customers the best technological edge in the business. Combining universal exchange/marketplace access, high performance, and full customization, X\_TRADER, with its sophisticated trading tools, enhances your presence in all the world's open-access electronic markets.

**X\_TRADER**® the ultra-fast, flexible trading screen for all stock, bond, futures and options trading

**X\_QUOTE<sup>TM</sup>** provides advanced quoting with sophisticated order and trade management.

GUARDIAN<sup>TM</sup> monitors system/exchange performance and administration.

X\_WEB<sup>TM</sup> is an extraordinarily fast, secure, internet-based trading system for the world's electronic markets that is designed specifically for massive scalability.

**X\_RISK**<sup>TM</sup> is the software tool that enables risk managers, desk managers and any authorized trader to monitor all trading activity.

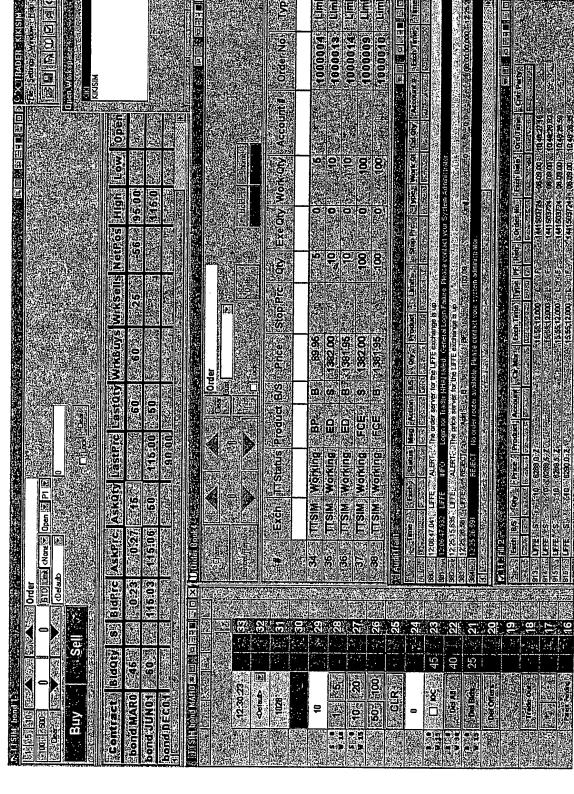
X\_MARKET MAKER<sup>TM</sup> provides you with a market making screen that allows you to enter two-sided markets with a single send command, as well as other market making features.

TT EXCHANGE<sup>TM</sup> is a highly flexible, state of the art, exchange-matching system designed to automate any exchange, OTC, multi-dealer or B2B marketplace.

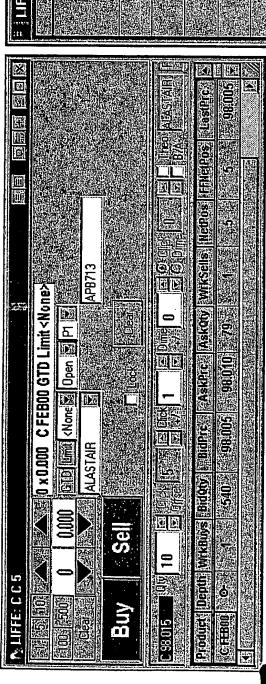


# X\_TRADER Features:

workspaces. You can customize each trading tool to respond to your specific needs X\_TRADER's modular design allows you to create one or more personal and trading style.







#### Market

Grid tools. These are your principal trading tools that allow you The Market window combines your Order Entry and Market Click Trading is a feature of the Order Entry window that allows you to trade with a single click of your mouse. to monitor the current market and place orders.

The Market Depth Trader window allows the trader to use instrument, and enables the trader to enter orders quickly by format dynamically displays the market depth for a given one click of the mouse to buy or sell products. The grid simply clicking on specific cells in the grid layout.

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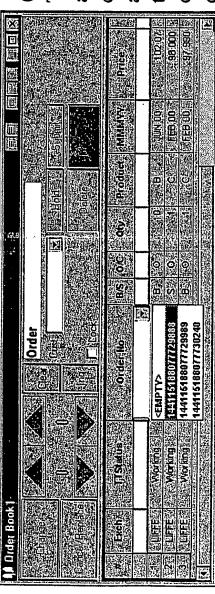
The Market Depth Trader window provides a view of the market depth for a selected product and you can open as many MD Trader windows as you have products in the Market Grid. From this window you can perform one-click trading for any single product that populates the MD Trader window. This trading method is used as an alternative to the click trading technique that is also available in X\_TRADER.

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#### **Audit Trail**

information are available to you on your workstation's hard drive in a Microsoft exchange and official exchange announcements. The last 10 days of Audit Trail The Audit Trail displays the current day's order-related messages from the Access file. You can narrow the range of data displayed.

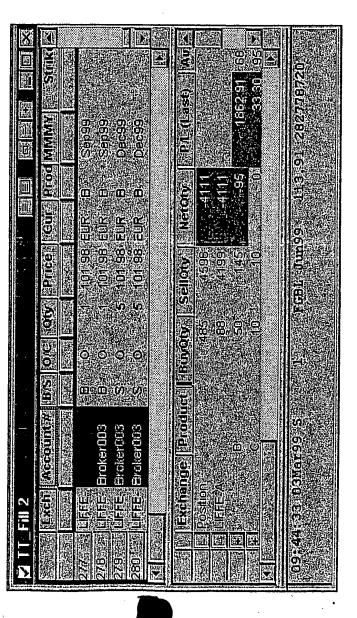


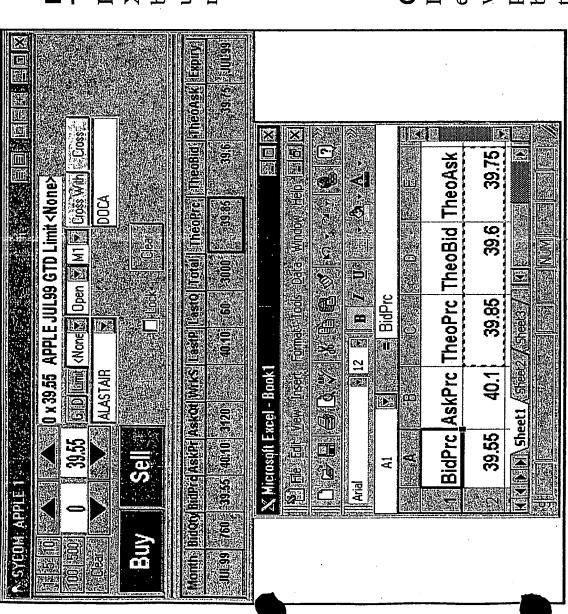
#### Order Book

The Order Book provides information about your current open orders. You can change or delete orders. You may also perform an inquiry to determine the status of an open order, and apply one or more filters to quickly sort and display data.

## Fill and Position panes

reflects the exchange-confirmed data about a trade. Use filters to narrow the range of orders displayed. The Position pane (middle section) provides your net position summary by exchange/marketplace, product and The Fill window provides detailed information about the current day's trades. The Fills pane (top section) contract. The Fast Fill pane (bottom section--supported by some exchanges) displays partial trade information until the confirmed trade data is received from the exchange.



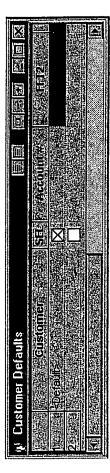


# Excel Two-Way Link for Theoretical & Implied Pricing

Link a Microsoft Excel worksheet to X\_TRADER to calculate theoretical bid/ask prices and/or implied prices using your proprietary pricing model(s).

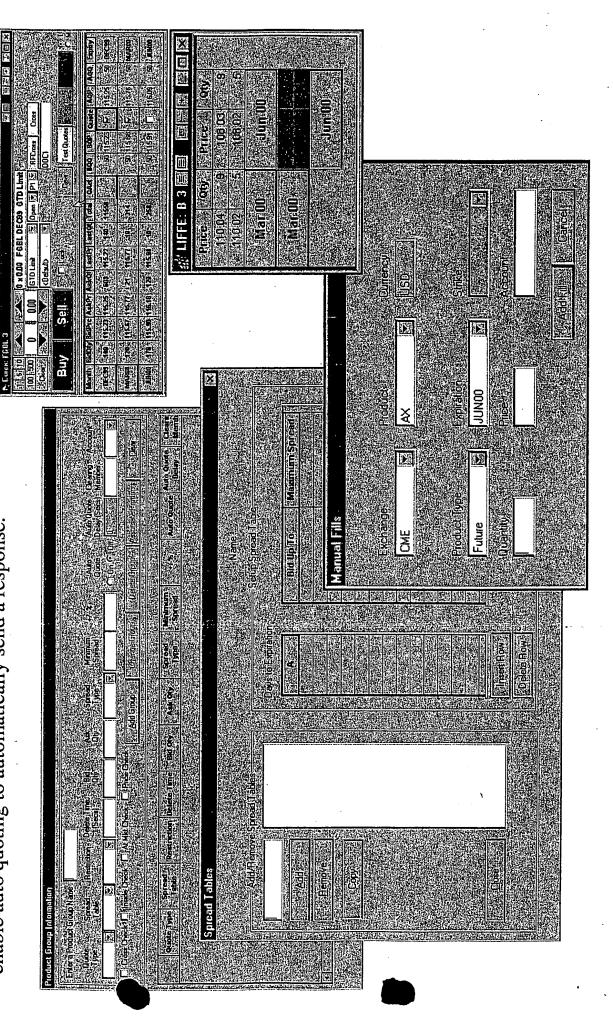
### **Customer Defaults**

Define Customer Default profiles to establish all of the most common order variables by customer name. Multiple profiles allow you to quickly switch between customers or apply different trading profiles for the same customer.



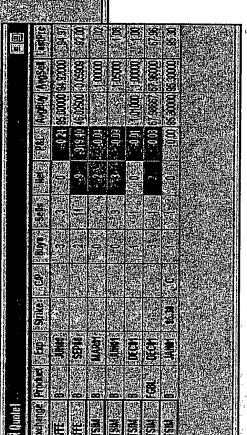
## X\_TRADER Quoting

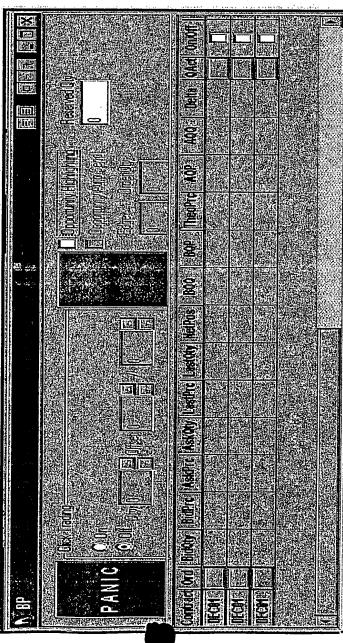
and Product Group(s), or you can manually enter individual quotes. You can respond to RFQs manually or You can generate quotes by using a proprietary theoretical pricing model, X\_TRADER Spread Table(s) enable auto quoting to automatically send a response.



# **X\_QUOTE** provides these additional functions and advantages:

- ☐ Market functionality for options, futures, and stock market makers
- Order and trade capability for market markers
  - Sophisticated order and trade managementGreater functionality for automatic quotes
    - Runs in conjunction with X\_TRADER





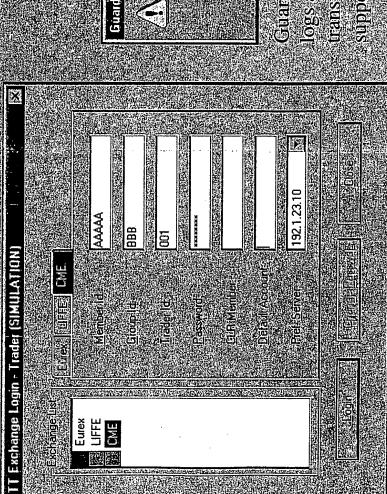
The Quote window displays contract information: all active quotes. You can pull all quotes or select quotes and edit individual quotes. You can open many Quote windows simultaneously by returning to the Market Explorer and selecting additional products.

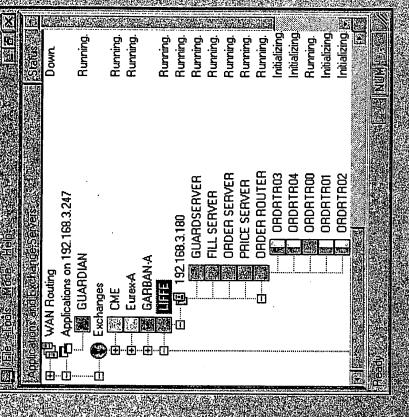
GUARDIAN is a service that runs on all X TRADER workstations. It is the central point of communication between a local machine (a trader's workstation) and the

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TT Gateway, (an exchange server). Guardian is also an administrative tool that may be used by a System.
Administrator on a trading or non-trading workstation to monitor the status of XITRADER and the TT Gateways.

Access X\_TRADER system on the local machine and TF Galeway Control of the local control of th







Guardian will also zip all relevant loca logs and configuration files for easy transfer of data to remote technical support staff X TRADISR WEB provides a browser based real time professional Internet

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trading tool with the following features and advantages:

encryption for your exchanges. Scalability.--Easily and quickly increase the number of users by simply adding machines

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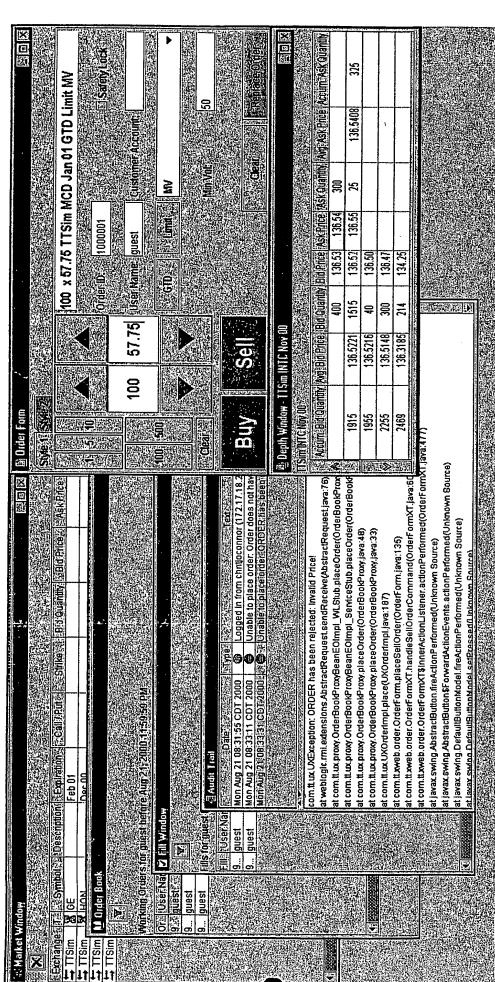
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## X TRADBRAWEBorovides

InternetAwareness — Internet connections that let you obtain a comprehensive view of the market even Real time - Real time market and price updates, as well as direct order entry into electronic markers when vou are away trom t

Simple and Inexpensive Administration and Deployment - Units clientarclitecture that can be easil Platform Independence - Your traders all have the same user interface, with no platform constraint deployed and updated over the web

Other Features -- Common order book, support of up to 1,000,000 simultaneous users, and localization user interface in drifferent languages

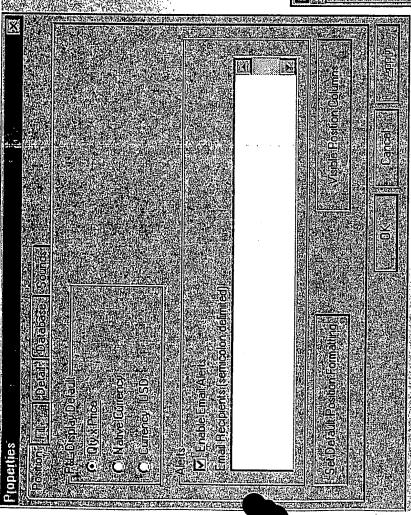
set alerts for various types of conditions, such as an alert threshold on P/L, or an alert manually, while receiving market updates and announcements. X\_RISK also lets you select. This information updates dynamically as fills arrive. You can also enter trades  $\overline{\mathbf{X}}$  RISK aggregates fills into a net position based on filters and the data range you limit on maximum position size.

You use X\_RISK to quantify the positions for which you manage risk. You can view positions several ways:

Market (Exchange and Option Type)
Product
Expiration Month
Expiration Year
Member
Trader
Group
Account type

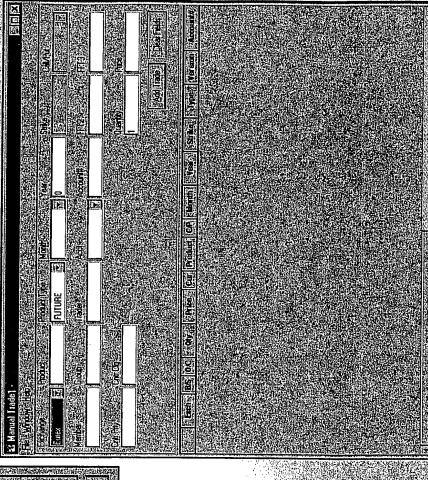
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which you manage risk. X\_RISK aggregates fills into a net position based on the filters The **Position** window is the main window in X\_RISK. It lets you view the positions for X\_RISK. You use date and time to indicate how far back you want fills and X\_RISK X\_RISK stores all downloaded fills into a database and holds them so that you can and data range that you select. This information updates dynamically as fills arrive generate reports. This database is also the source for fills that you can load into delivers the fills into the application



The Manual Trades window is used to view and enter new manual trades and to delete unwanted manual trades from your current position of filled addes. Fills for manual trades are added to the current net position in the position window where they apply. You can manually add or delete all orders executed through an alternate source. You can calculate your true position and P&E(profit/loss) when you use the Manual Trades feature.

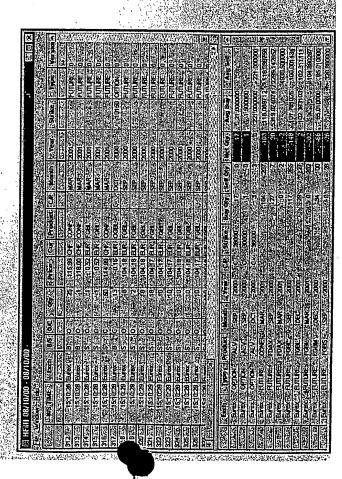
Use the tabs in this **Properties** dialog box to set up e-mail notification for alerts, change database connections, arrange to archive and purge fill records, hide and show columns for the various X\_RISK windows, select PL display defaults, and select sounds for alerts:



Reports are subject to the filters that you set in X\_RISK. You use the Reports dialog box to set the filters and generate the reports, either to files to a printer.

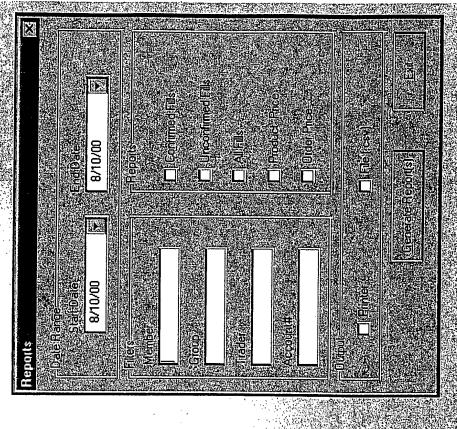
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The **Historical Fill** window allows the query of historical fill and position information from the database.



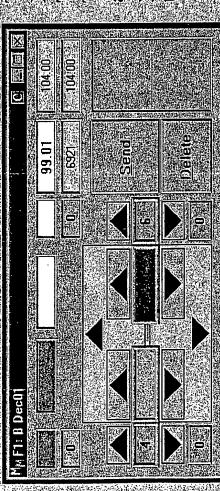
These are the reports that you can produce with X\_RISK:

The Confirmed Fills Report
The Unconfirmed Fills Report
The All Fills Report
The Product Price Report
The Order Price Report



# X MAKRIKETIMAKKOR<sup>M</sup> is an addeon tool to beynsed in conjunction with the

X\_TRADER Trading System™. Designed to give you and your customers the best technological making features. Working with X TRADER, this tool will enhance your presence in all the allows you to enter two-sided markets with a single send command, as well as other market edge in the business, X\_MARKETIMAKER provides you with a market making screen that world's open access markets



Trading for each product in.

X MARKETMAKER is done using the

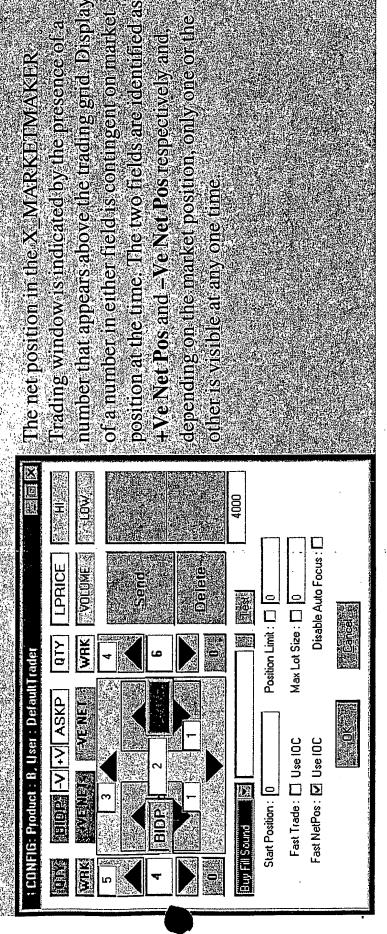
Trading window. One X MARKETMAKER

Trading window is created for each product tha appears on the Working Order Grid, allowing you to track multiple products during any one trading session.

Mkt Bid Qty	Mkt Bid Price	Mkt Ask Price	Mkt Ask Qty	Mkt Last Price	Mkt High
MM Work Buys	+Ve NetPos	-Ve NetPos	MM Work Sells	Mkt Volume	Mkt Low
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dentify the characteristics of the traded products. Use the mouse expose the column headings or resize the screen for an expanded and the sliding bar at the bottom of the Working Order Gridto. The Working Order Grid has a variety of column headings to

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#### The TT Exchange Market How the Market Works

The TTX supports the ability to be several markets. That is, the TTX is able to present several markets, each with a unique exchange (market) name. This is useful for the presentation of simulation markets, or dividing products into separate markets for reasons of organization and/or security.

The architecture is an Oracle database serving as the market, and a TT GW front end to present an interface into the market. Matching occurs in the database via a trigger, which is easily modifiable on a per-product and/or per-member basis, even by the end customer administrator.

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## Client Applications

TT EXCHANGE can be accessed via any ITTAPI client application. This includes, but is not limited to, X\_ITRADIER, X\_ITRADIER WEB, X\_RISK, X\_QUOTIE, X\_MARKET MAKER and X\_FILE. III EXCHANGE includes GUI interfaces for administrative functions. In addition to access via X\_IRADER using the HITTP protocol. The web interface facilitates basic trade operations: an order book, trade book (fill WIBB, TT EXCHANGE has its own web-inabled client application. This client for TTX is an HTML client "yindow), and audit trail, as well as the ability to receive price updates. The back-end (business & scaling logic) of this application exists within 1TI EXCHANGE (the db and/or GW) as opposed to the XTrW application server.

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#### APPENDIX E

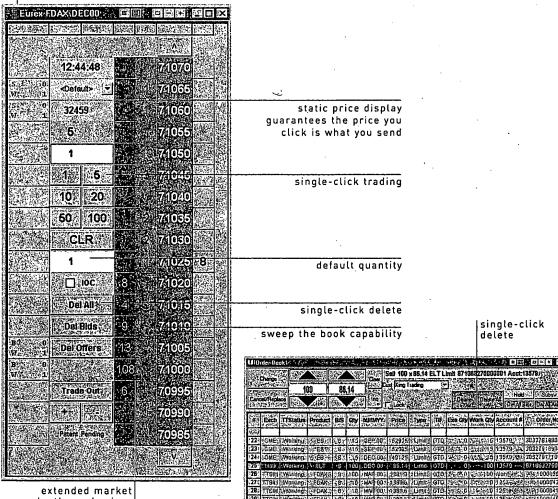


MD\_TRADER™ is the software that is revolutionizing the electronic trading industry. It is the only electronic interface that enables trading directly from market activity.

TECHNOLOGIES

- Enables users to anticipate and respond instantly to movements in the marketplace
- Guarantees trade execution at prices selected by the user
- Unique vertical display of market depth provides constant view of market activity
- Trading screen can reset automatically, so that market gaps are always visible
- One window views working orders, fills and market depth

view multiple products from multiple exchanges



depth emphasizes liquidity and movement

filters

partial fills

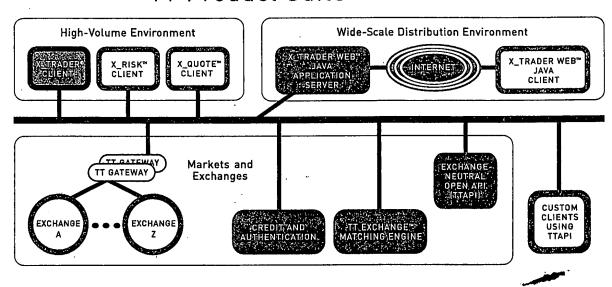


TRADING TECHNOLOGIES



- 850 MHz or higher recommended, Intel 550 Hz minimum
- Windows NT workstation 4.0 or Windows 2000. For NT 4.0 use Service Packs 5, 6a (SP 6 is not recommended)
- 128 MB RAM minimum
- 1GB of available hard disk space for software and log files (EIDE sufficient, Ultra-wide SCSI or ultra-wide SCSI II recommended)
- Hard disks formatted using NTFS (file system)
- . 10/100 Mb auto-switching network interface card
- CD-ROM and 1.44 MB floppy drives
- 21" color-8 plane color monitor, tested to 1600x1200
- For single monitor use, a 32 Mb AGP graphics card is recommended. A 16Mb PCI graphics card with 16 bit video depth is minimum. For multiple monitor use, an AGP graphics card with 32 Mb per monitor head is recommended.
- 3-button mouse to support middle button click trading with Microsoft Intellimouse (Intellipoint) software removed. A twobutton mouse is supported, but Click and Dime trading are mutually exclusive.
- Tibco (included with TT software)

#### TT Product Suite



#### For additional, information, please contact one of the following sales off

One World Trade Center 86th Floor New York, NY 10048 USA

Phone +1.212.313.5300

100 South Wacker Drive **Suite 1824** 

Chicago, IL 60606 USA

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1603 Orrington Avenue **Suite 1300** 

Evanston, IL 60201 USA

Phone +1.847.424.8844

UK Ltd. 36 Poultry

London EC2R 8AJ

Bockenheimer Landstrasse 39 60325 Frankfurt Germany

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Phone +49.69,138,726.0